

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. to 12. (canceled).

13. (currently amended): A vapor phase process for producing a titanium oxide comprising:

preliminarily heating each of a titanium halogenide-containing gas and an oxidative gas at a temperature of at least 600°C but less than 1,100°C before introducing the titanium halogenide-containing gas and the oxidative gas into a reactor

reacting the titanium halogenide-containing gas with the oxidative gas by introducing the titanium halogenide-containing gas and the oxidative gas into the reactor, to thereby allow reaction to proceed, with the temperature of the interior of the reactor being 900°C to less than 1,000°C, and

maintaining a residence time of the titanium halogenide-containing gas and the oxidative gas in the reactor at temperature range of 900°C to less than 1,000°C of 0.005 seconds to 0.05 seconds~~0.1 seconds or less~~.

14. (previously presented): A process for producing a titanium oxide according to claim 13, wherein reaction is performed by use of a raw material gas mixture containing titanium halogenide and an inert gas at a ratio of 1 : 0.1 - 20 by mol, and also by use of an oxidative gas whose amount is 1 to 30 mol on the basis of 1 mol of the titanium halogenide.

15. (previously presented): A process for producing a titanium oxide according to claim 13, wherein the oxidative gas is an oxygen gas containing water steam.

16. (original): A process for producing a titanium oxide according to claim 15, wherein the oxidative gas contains steam in an amount of at least 0.1 mol per 1 mol of an oxygen gas.

17. (previously presented): A process for producing a titanium oxide according to claim 13, wherein said titanium halogenide is titanium tetrachloride.

18. (currently amended): A vapor phase process for producing a titanium oxide comprising:

reacting a titanium halogenide-containing gas with an oxidative gas by introducing the titanium halogenide-containing gas and the oxidative gas into a reactor, to thereby allow reaction to proceed, with the temperature of the interior of the reactor being 900°C to less than 1,000°C,

maintaining a residence time of the titanium halogenide-containing gas and the oxidative gas in the reactor at temperature range of 900°C to less than 1,000°C of 0.005 seconds to 0.05 seconds ~~0.1 seconds or less~~ to obtain a titanium oxide, and

further comprising dehalogenating the obtained titanium oxide by means of a dry dehalogenation method.

19. (original): A process for producing a titanium oxide according to claim 18, wherein, in the dry dehalogenation method, titanium oxide is heated to 200 to 500°C.

20. (original): A process for producing a titanium oxide according to claim 18, wherein, in the dry dehalogenation method, a steam-containing gas is heated to 200 to 1,000°C, and is brought into contact with titanium oxide.

21. (original): A process for producing a titanium oxide according to claim 20, wherein the steam-containing gas is air containing steam in an amount of at least 0.1 vol.%.

22. (original): A process for producing a titanium oxide according to claim 20, wherein the ratio by mass of the steam to the titanium oxide is at least 0.01.

23. (currently amended): A vapor phase process for producing a titanium oxide comprising:

reacting a titanium halogenide-containing gas with an oxidative gas by introducing the titanium halogenide-containing gas and the oxidative gas into a reactor, to thereby allow reaction to proceed, with the temperature of the interior of the reactor being 900°C to less than 1,000°C, maintaining a residence time of the titanium halogenide-containing gas and the oxidative gas in the reactor at temperature range of 900°C to less than 1,000°C of 0.005 seconds to 0.05 seconds ~~0.1 seconds or less~~ to obtain a titanium oxide, and

further comprising dehalogenating the obtained titanium oxide by means of a wet dechlorination method, to thereby yield a slurry containing a titanium oxide.

24. (original): A process for producing a titanium oxide according to claim 23, wherein, in the wet dehalogenation method, titanium oxide is suspended in water, and chlorine which is transferred to a liquid phase is discharged to the outside of the resultant suspension.

25. (original): A process for producing a titanium oxide according to claim 23 or 24, wherein, in the wet dehalogenation method, separation of chlorine is performed by use of an ultrafiltration membrane.

26. (original): A process for producing a titanium oxide according to claim 23 or 24, wherein, in the wet dehalogenation method, separation of chlorine is performed by use of a reverse osmosis membrane.

27. (original): A process for producing a titanium oxide according to claim 23 or 24, wherein, in the wet dechlorination method, separation of chloride is performed by use of a filter press.

28. to 39. (canceled).

40. (previously presented): The process according to claim 13, wherein the residence time is 0.01 to 0.05 seconds.

41. (previously presented): The process according to claim 18, wherein the residence time is 0.01 to 0.05 seconds.

42. (previously presented): The process according to claim 23, wherein the residence time is 0.01 to 0.05 seconds.